

Title (en)
PHASE MODULATION DEVICE AND LASER MICROSCOPE

Title (de)
PHASENMODULATIONSVORRICHTUNG UND LASERMIKROSKOP

Title (fr)
DISPOSITIF DE MODULATION DE PHASE ET MICROSCOPE LASER

Publication
EP 2811335 B1 20191030 (EN)

Application
EP 13743360 A 20130201

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Abstract (en)
[origin: EP2811335A1] A phase modulation device (3) corrects wave front aberrations generated by an optical system including an objective lens (4) disposed on an optical path of a light flux of coherent light to be emitted from a coherent light source (1). The phase modulation device (3) includes a phase modulation element (11) which includes a plurality of electrodes, and modulates the phase of the light flux in accordance with a voltage applied to each of the electrodes, and a control circuit (12) which controls the voltage to be applied to each of the electrodes. The control circuit controls the voltage to be applied to each of the electrodes in such a manner that the light flux is imparted with a phase modulation amount in accordance with a phase modulation profile having a polarity opposite to the polarity of a phase distribution to be determined according to a relational equation representing a relationship between a numerical aperture of the objective lens (4) and a ratio between third-order spherical aberration and fifth-order spherical aberration when the phase distribution of the wave front aberrations generated by the optical system is resolved using Zernike polynomials.

IPC 8 full level
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